ABSTRACT

A sampling apparatus for use in high data rate jitter measurement systems based on offset sampling is disclosed. A trigger circuit is used, along with a time-based variable delay, to align a sampling strobe to drive two samplers. An input data signal is split and fed via separate signal paths into the two samplers. One of the samplers is delayed in sampling the input signal or the input is delayed to one of the samplers, such that the two samples of the input signal are offset in time. The jitter present in the SUT can be calculated using the two samples. In addition, when using two strobe circuits, the jitter inherently present in the strobe circuits can be compensated for by offset sampling a reference clock with each main strobe to determine the phase and cycle number of the reference clock at each strobe time.